

REMARKS

Claims 1-7 are pending. The Abstract of the Disclosure has been amended. Claims 1-2 have been canceled. Claim 3 has been amended to place it into independent form, where the subject matter of claims 1 and 2 have been incorporated into claim 3. Claims 4-7 have been amended. No new matter has been added by way of this amendment. Reconsideration of the application is requested.

The Examiner has objected to the Abstract of the Disclosure. In response to this objection, Applicant has amended the Abstract in a manner that is believed to address the specific objection. Accordingly, reconsideration and withdrawal of the objection are respectfully requested.

Claims 4, has been objected to based on a certain informality. In response to this ground of objection, Applicant has amended the claims in a manner that is believed to address each specific rejection. Accordingly, reconsideration and withdrawal of this objection are respectfully requested.

Claims 2, 4, 6-7 stand rejected under 35 U.S.C. §112, ¶ 2, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In response to this ground of rejection, Applicant has amended the claims in a manner that is believed to address each specific rejection. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Claims 1-3, and 5-6 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,936,155 to *Francois* et al. Claims 1-3, and 6 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,033,295 to *Schmid* et al., while claims 4 and 7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the same reference. These rejections are respectfully traversed.

Claim 3 includes the limitation “a rotary antenna carried by the wheel and a fixed antenna carried by the spindle, both of which are disposed in a vicinity of the free end of the spindle and are placed so as to face each other in succession in line with the spindle.” That is, both the rotary antenna and the fixed antenna are located in the vicinity of the free end and in the direction in which the spindle extends (support for this limitation may be found on page 5, lines 10-11 of the specification).

U.S. Patent No. 5,936,155 to *Francois* et al. discloses a device and process for monitoring the condition of the tires of a vehicle, and their surrounding environment. According to this patent, the device uses a central unit and wheel module with at least one measuring sensor for each wheel. The module is electrically connected to a rotating antenna that is firmly attached to the hub of the wheel, as well as a stationary antenna that is firmly attached to the hub housing of the wheel and connected to the rotating antenna (see col. 2, line 66 thru col. 3, line 8). However, this patent fails to teach that both a rotary antenna that is carried by a wheel and a fixed antenna that is carried by the spindle are disposed in a vicinity of a free end of a spindle, and are also placed so as to face each other in succession in line with the spindle. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. §102(b) are respectfully requested.

U.S. Patent No. 5,033,295 to *Schmid* et al. relates to first repeater coil, which is electrically connected with a second repeater coil, both of which are arranged in the area of a signal transmitter coil located at the hub carrying the rim. According to this patent, the hub is connected with the signal transmitter such that it is fixed with respect to rotation relative to it, and the second repeater coil is constructed as a toroidal coil whose coil axis lies in the hub access. The signal pickup coil of the stationary high-frequency resident circuit signal evaluating arrangement is arranged in the magnetic field area of the second repeater coil (see col. 1, lines 35-45). However, this patent also fails to teach that both a rotary antenna that is carried by a wheel and a fixed antenna that is carried by the spindle are disposed in a vicinity of a free end of a spindle, and are also placed so as to face each other in succession in line with the spindle.

In both the *Francois* et al. and *Schmid* et al. patents, the wheel is engaged around the spindle. Furthermore, in each arrangement, antennas are arranged on the side of the wheel that faces the vehicle. Consequently, the antennas disclosed in the *Francois* et al. and/or *Schmid* et al. patents are around the spindle and thus, they are not located in the vicinity of the free end and in the direction in which the spindle extends, as set forth in claim 3 as amended.

In the present claimed invention, the particular location of the antenna enables the antennas to have a small diameter. Indeed, the diameter of the antennas can be equal to or lower than the diameter of the spindle. Furthermore, the antenna of the claimed invention is in the extension of the spindle, which means that they do not radially protrude from the spindle. As a result, the wheel can be engaged with the fixed antenna even when it is already installed.

Lastly, a wheel arrangement includes numerous accessories, such as brakes and bumpers, and the like. As a result, the available space for accommodating antennas is quite small.

By mounting the antenna at the free end of the spindle, as claimed in the present invention, the space close to the wheel can be used for the wheel accessories. Such a problem, which is solved by the present invention, is not stated in the cited prior art.

Applicant respectfully asserts that none of the cited references, either individually or in combination, disclose that both a rotary antenna that is carried by a wheel and a fixed antenna that is carried by the spindle are disposed in a vicinity of a free end of a spindle, and are also placed so as to face each other in succession in line with the spindle, as set forth in amended claim 3. Consequently, one of ordinary skill in the art would not have been motivated to move the antennas taught in the *Francois* et al. and/or *Schmid* et al. patents from around the spindle such that they would be placed at the free end of the spindle. Furthermore, even if the idea to move the antennas existed, one skilled in the art would not have been motivated to reduce the size of the antennas so that they would be in the extension of the spindle because such a teaching is absent from the prior art. In view of the foregoing, Applicant respectfully asserts that amended claim 3 is not anticipated, nor rendered obvious by the *Schmid* et al. patent even when it is considered alone or in combination with the *Francois* et al. patent. Accordingly reconsideration and withdrawal of the rejections under 35 U.S.C. 102(b) and 35 U.S.C. §103(a) are respectfully requested.

In view of the patentability of independent claims 3, for the reasons above, dependent claims 4-7 are patentable over the cited prior art.

Each and every point raised in the Office Action dated February 20, 2003 has been addressed on the basis of the above amendments and remarks. Early passage of this case to issue is therefore respectfully requested. However, if there are any questions regarding this Response, or

the application in general, a telephone call to the undersigned would be appreciated since this would expedite the prosecution of the application for all concerned.

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Respectfully submitted,

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